

Collection Conundrum

(Exploratory Task)

**Standard**: 4 NBT 5 Multiply a whole number of up to 4 digits by a one-digit number, and multiply two-two digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

**Launch:**

How many of you have a collection? What do you collect? Do you store your collection or have it on display? We are going to start collecting rocks and need a way to get them all displayed.

**Explore:**

The first organizer I bought has 15 columns and 2 rows. How many rocks will it hold?

You decided that you would also like to start a rock collection. The organizer that you have purchased has 24 rows and 15 columns. If you have 347 rocks, will they fit in this case?

**Sharing and Discussion:**

1. Describe the process your group used to figure out this problem.

**Extension:**

Jorge has 375 rocks, what is the smallest size case that would work for his collection?

Design a display case for your own rock collection. Your collection must have at least 172 rocks. What size of organizer would be best for your collection?